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PTO/SB/05 (12/97) (modified)

Approved for use through 09/30/00. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

11/25/00

Attorney Docket No.

US/2000/1

Total Pages

41

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

First Named Inventor or Application Identifier

Rani K. Yadav-Ranjan

BOX - PATENT APPLICATIONS

**CERTIFICATE OF EXPRESS MAIL**

I hereby certify that this correspondence is being filed with the United States Patent and Trademark Office in Washington, D.C. on November 25, 2000, by Express Mail of the U.S. Mail.

Rajiv Y. Ranjan

JC825 U.S. PTO 09/21/28

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

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1. ☒ Fee Transmittal Form  
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages 27]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 USC 113) [Total Sheets 6]
4. ☒ Oath or Declaration [Total Pages 2]
- a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63(d)  
(for continuation/divisional with Box 17 completed)  
[Note Box 5 below]
  - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in  
the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Copy
  - b. ☐ Paper Copy (identical to computer copy)
  - c. ☐ Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
14. ☒ Small Entity ☒ Statement no longer required under  
the law
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Power of Attorney

17. If a **CONTINUING APPLICATION**, check appropriate box and supply the requisite information:☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No:**18. CORRESPONDENCE ADDRESS**

RANI K. YADAV-RANJAN  
6620 CREEKVIEW COURT  
SAN JOSE, CA 95120  
United States of America

Post Card

Returned

The filing fee has been calculated as follows:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	41	51	x \$22.00	\$1122.00
INDEPENDENT CLAIMS	4	1	x \$82.00	\$82
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$270.00	\$270
			BASIC FEE	\$790.00
			TOTAL OF ABOVE CALCULATIONS =	\$2,264.00
Reduction by 1/2 for filing by small entity (Note 37 C.F.R. §§ 1.9, 1.27, 1.28). If applicable, verified statement must be attached.				\$1,1320
Assignment Recording Fee (if enclosed)				\$40
			TOTAL =	\$ 1,172.00

☒ A check in the amount of \$1,172 will be deposited later.

Dated: November 25, 2000

Respectfully submitted,

By: \_\_\_\_\_  
Rani K. Yadav-Ranjan  
Applicant

6620 Creekview Court  
San Jose, CA 95120  
Telephone: (408) 323-8919  
Facsimile: (408) 323-8649

Applicant/Patentee: Rani K. Yadav-Ranjan

Serial No./Patent No.: \*

Filed on/Issued : November 25, 2000

For: A Method and System for Conducting transaction associated with Invoices using the Internet and E-Commerce.

Docket No.: US/2000/1

Client Reference:

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
37 C.F.R. §§ 1.9(f) AND 1.27(c) — SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:  
☐ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: Rani K. Yadav-Ranjan

ADDRESS OF CONCERN: 6620 Creekview Court, San Jose, CA 95120

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. § 121.12, and reproduced in 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled *A Method and System for Conducting transaction associated with Invoices using the Internet and E-Commerce* by inventor(s) Rani K. Yadav-Ranjan

described in

- ☐ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

If the rights held by the above identified business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 C.F.R. § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d), or a nonprofit organization under 37 C.F.R. § 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

- ☐ no such person, concern, or organization exists.  
☐ each such person, concern or organization is listed below.

NAME	ADDRESS	TYPE
		<input type="checkbox"/> Individual <input type="checkbox"/> Small Business Concern <input type="checkbox"/> Nonprofit Organization

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

I acknowledge the duty to file, in this application or patent, notification or any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Rani K. Yadav-Ranjan

TITLE OF PERSON IF OTHER THAN OWNER:

ADDRESS OF PERSON SIGNING: 6620 Creekview Court, San Jose, CA 95120

SIGNATURE: Rani Yadav-Ranjan

DATE: Nov 25, 2000

# PROCESS AND DEVICE FOR CONDUCTING ELECTRONIC TRANSACTIONS

## Related Applications

This application claims priority from Provisional Application Serial Nos. 60/170,829  
5 filed December 12, 1999, entitled "System and process of conducting transactions associated  
with parking tickets or parking citations using the Internet and e-commerce," 60/167,938 filed  
November 27, 1999, entitled "System and process of conducting transactions associated with  
traffic tickets or citations using the Internet and e-commerce," 60/174,123 filed December 30,  
1999, entitled "System and process of conducting transactions associated with Emergency  
10 vehicles or Police Administrative Citation using the Internet and e-commerce," 60/174,124 filed  
December 30, 1999, entitled "System and process of conducting transactions associated with  
Court Tickets, Court Warrants or Court Citations using the Internet and E-commerce,"  
60/199,910 filed April 26, 2000, entitled "A system and process of conducting transactions  
associated with Utilities (Water and/or Garbage) using the Internet and E-Commerce," the entire  
15 disclosures of which are hereby incorporated herein by reference.

## Field of Invention

This invention relates to a process and a device for conducting electronic transactions.

## Background

Currently, a Police Administration Citation or Police Administration Ticket is issued to  
the individual committing the offense who is found to be guilty by the Judicial Department. This  
would involve the collection of all expenses for the dispatch of Emergency Vehicles, incurred  
during the course of the incident. A copy of the Police Administration Citation or Police  
25 Administration Ticket is entered into the Judicial Department Database manually or from an  
Electronic Hand held Police Administration Citation issuing device. The individual has the  
opportunity to pay the Police Administration Citation /ticket by mail with a check, cashiers  
check or in person with cash within 21 days from the date of the issuance. If no payment has  
been made, there may be penalties incurred after this time. Once the grace period has run out  
30 the, incurred amount is then added to the local Department of Motor Vehicle's registration

procedure, also there may be a hold placed on the vehicle registration until the new amount (original + penalties) is paid. This process is very cumbersome.

Currently, the Citation is issued to the individual committing the offense and a copy is entered into the Police Department Database manually. After approximately 45 days the citation is transferred to the Court of County Clerks office, where a warrant is issued and another 15day grace period begins. The individual has the opportunity pay the citation by mail with a check, cash or cashiers check within the original 45 days or in person during the 15day grace period. There may be penalties incurred during this time. Once the warrant is issued the individual will then have to appear in front of the Presiding Judge and make arrangements for payment. This may include time-triggered payments or automatic payroll deductions. This process is very cumbersome.

Currently, a Citation is issued to the individual committing the offense who can be found to be guilty or not guilty by the Judicial Department. This would involve the collection of all expenses incurred during the course of the incident/accident. Currently a copy of the citation, warrant or ticket is entered into the Judicial Department Database manually. The individual has the opportunity to pay the citation, warrant or ticket by mail with a check, cashiers check or in person with cash within 21 days from the date of the issuance. They also have the option to plead Guilty (and pay the fine issued, set up a court date) or Non-Guilty (and pay the fine and set up a court date) or they can simply pay the fine. If no payment has been made, there may be penalties incurred after this time. Once the grace period has run out the, local Police Department are ordered to find the individual and arrest them. There also may be a hold placed on their bank accounts to secure the amount necessary to satisfy the fine. This process is very cumbersome.

Currently, a Citation is issued to the individual committing the offense and a copy is entered into the Judicial Department Database manually or from an Electronic Hand held citation-issuing device. The individual has the opportunity pay the citation /ticket by mail with a check, a cashiers check or in person with cash within 21 days from the date of the issuance or sign-up for a educational course through the Police Department. If no payment has been made, there may be penalties incurred after this time. Once the grace period has run out the, incurred amount is then added to the local Department of Motor Vehicle's registration procedure, also there may be a hold placed on the vehicle registration until the new amount (original + penalties) is paid. This process is very cumbersome.

Currently, a Utility: water and garbage entity issues a bill to a individual or business. This would involve the collection of funds for the dispatch of Utilities (Water and/or Garbage), incurred during the course of a specified time period. Currently a copy of the Utilities (Water and/or Garbage) is entered into the City/county Database manually. The individual has the opportunity to pay the bill by mail with a check; a cashier's check or in person with cash within 30 days from the date of the invoice. If no payment has been made, there may be penalties incurred after this time. Once the grace period has run out the, incurred amount is then added to the previous months. After 3 months the City may issue a lien on the property in question until the new amount (original + penalties) is paid. This process is very cumbersome.

### **Summary of the Invention**

In one embodiment, this invention deals with Police Administration Citations/Bill or Police Administration Ticket violations for illegal non-moving violation per the rules set by the City, County, State, Township or local government. This invention provides a simpler and more efficient way to pay the Emergency Vehicle, Police Administration Ticket or Police Administration Citation using the Internet. Thus, in one embodiment, this invention provides a cost-effective means of collecting revenue from Police Administration Police Administration Citation and/or Violations using the Internet.

In one embodiment, this invention relates to a system to enable one to pay a traffic Violation Ticket or Citation via the Internet. The system involves a Web Browser who access the Corporate in-house Server in real-time which collects the necessary information and then interacts with the Corporate database for retrieval of vital information and amount balances to satisfy the payment of a Citation or Traffic ticket. This information is then confirmed and used to contact Banks and other Financial Institutions for payment of the Citation or Traffic Violation. The Corporate database is updated in Real-time with all necessary information to satisfy the Citation or Traffic Violation. The Funds are transferred into the Corporate Bank and a validation voucher is issued via E-mail to the customer and Corporate notifying of this transaction. This invention deals with Traffic Citations or Traffic ticket violations for speeding or any other moving violation per the rules set by the City, County or local government. Thus this invention provides a cost-effective means of collecting revenue from Traffic Citations and/or Violations using the Internet.

In one embodiment, this invention relates to a system to enable one to pay a Court Ticket, Court Warrant or Court Citation via the Internet. The system involves a Web Browser who access the Corporate in-house Server in real-time which collects the necessary information and then interacts with the Corporate database for retrieval of vital information and amount balances to satisfy the payment of the Citation, Warrant or Ticket. This information is then confirmed and used to contact Banks and other Financial Institutions for payment of the Citation, Warrant or Ticket. The Corporate database is updated in Real-time with all necessary information to satisfy the Citation, Warrant or Ticket. The Funds are transferred into the Corporate Bank and a validation voucher is issued via E-mail to the customer and Corporate notifying of this transaction. In one embodiment, this invention deals with Court Citations; Court Warrant or Court Ticket violations for illegal non-moving violation per the rules set by the County, Township, State or local government. This invention provides a simpler and more efficient way to pay the Court Citation, Court Ticket or Court Warrant using the Internet. Thus this invention provides a cost-effective means of collecting revenue from Court Ticket, Court Citations, Court Warrant using the Internet.

In one embodiment, this invention relates to a system to enable one to pay a Parking Violation Ticket or Citation via the Internet. The system involves a Web Browser who access the Corporate in-house Server in real-time which collects the necessary information and then interacts with the Corporate database for retrieval of vital information and amount balances to satisfy the payment of the Citation or Parking Tickets. This information is then confirmed and used to contact Banks and other Financial Institutions for payment of the Citation or Parking Violation. The Corporate database is updated in Real-time with all necessary information to satisfy the Citation or Parking Violation. The Funds are transferred into the Corporate Bank and a validation voucher is issued via E-mail to the customer and Corporate notifying of this transaction. This invention deals with Parking Citations or Parking Ticket violations for Illegal non-moving violation per the rules set by the City, Township or local government. In one embodiment, this invention provides a simpler and more efficient way to pay the Parking Tickets or Citation using the Internet. Thus this invention provides a cost-effective means of collecting revenue from Parking Citations and/or Violations using the Internet.

In one embodiment, this invention relates to a system to enable one to pay a Utility (Water/Garbage) Invoice via the Internet. The system involves a Web Browser which access the



Corporate in-house Server in real-time which collects the necessary information and then interacts with the Corporate database for retrieval of vital information and amount balances to satisfy the payment of the Invoice for Utilities (Water and/or Garbage). This information is then confirmed and used to contact Banks and other Financial Institutions for payment of the Invoice.

5 The Corporate database is update with all necessary information to satisfy the Invoice. The Funds are transferred into the Corporate Bank and a validation voucher is issued via E-mail to the customer and Corporate notifying of this transaction. This invention deals with Utilities (Water and/or Garbage) for City, County, State, Township or local government. In one embodiment, this invention provides a simpler and more efficient way to pay the Utilities (Water and/or Garbage) using the Internet. Thus this invention provides a cost-effective means of  
10 collecting revenue from the customers using the Internet.

One embodiment of this invention relates to a process for conducting a transaction using a medium, comprising generating a receipt and a payment remittance information; enabling an entity to authorize a payment due on the receipt; and associating the payment with the payment remittance information; wherein the payment remittance information is arranged within a data  
15 structure according to a prescribed format, the data structure comprising one or more open data fields to hold data that the entity can enter, and the payment remittance information further comprises a structured remittance data that is kept hidden from the entity.

Another embodiment relates to process of executing computer-executable instructions using a medium, comprising storing a receipt and a payment remittance information, the payment remittance information comprising a structured remittance data that is kept hidden from  
20 an entity; presenting the receipt to the entity without revealing the structured remittance data; enabling the entity to specify payment instructions comprising at least an amount to be paid on the receipt and an account at a payor from which to draw the amount while prohibiting the entity from altering data contained in the structured remittance data; associating the payment  
25 instructions with the structured remittance data; transmitting the payment instructions to the payor to initiate payment of the amount; and routing the amount to a payee.

Another embodiment relates to a device, comprising means for generating a receipt and a payment remittance information; means for enabling an entity to authorize a payment due on the receipt; and means for associating the payment with the payment remittance information;  
30 wherein the device conducts a transaction using a medium, and wherein the payment remittance



information is arranged within a data structure according to a prescribed format, the data structure comprising one or more open data fields to hold data that the entity can enter, and the payment remittance information further comprises a structured remittance data that is kept hidden from the entity.

5 Still another embodiment relates to a device, comprising means for storing a receipt and a payment remittance information, the payment remittance information comprising a structured remittance data that is kept hidden from an entity; means for presenting the receipt to the entity without revealing the structured remittance data; means for enabling the entity to specify payment instructions comprising at least an amount to be paid on the receipt and an account at a  
10 payor from which to draw the amount while prohibiting the entity from altering data contained in the structured remittance data; means for associating the payment instructions with the structured remittance data; means for transmitting the payment instructions to the payor to initiate payment of the amount; and means for routing the amount to a payee.

The receipt is selected from the group consisting of a traffic ticket, a citation, a utility  
15 bill, a court ticket, a court warrant, hospital receipt, a rental receipt, a property tax receipt, a property transfer tax receipt, a business permits receipt, a business license receipt, a business license renewal receipt, an administrative citation receipt, a facility rental receipt, a class sign-up receipt, a building permit receipt, a planning permit receipt, an airport use receipt, a roads and  
20 highway receipt, a fire department receipt, a waste disposal receipt, a recycling waste bill, a marriage license receipt, a birth certificate receipt, a death certificate receipt, a lien receipt, a passport application receipt, a passport renewal receipt, a visa application receipt, a visa renewal receipt, a land development maps receipt, an United States Geological Service Maps Division receipt, an Internal Revenue Service receipt, a State Tax Board receipt, a Driver's license  
25 renewal receipt, a Vehicle License tags renewal receipt, a car insurance receipt, an electric bill, a phone bill, a gas bill, a water receipt, a business tax receipt and a parking ticket.

The medium or device is selected from the group consisting of a computer, a cellular telephone, a portal, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, bar  
30 codes, data crystals, artificial intelligence, laser scanners and computer-executable instructions.

The entity is selected from the group consisting of a citizen, a business, an institution, an agency and a university. The payor is selected from the group consisting of a bank, an entity and a credit card facility. The payee is selected from the group consisting of an intermediary, a government agency, a government department, a business, citizens and a collection agency.

### **Brief Description of the Drawings**

Fig. 1 schematically shows a three-tier system architecture layout for an entity hardware and software design process of conducting transactions associated with Court Tickets, Court Warrants or Court Citations using the Internet and E-commerce.

Fig. 2 schematically show a three-tier system architecture layout for an entity hardware and software design process of conducting transactions associated with Traffic Tickets or Citations using the Internet and E-commerce.

Fig. 3 schematically show a three-tier system architecture layout for an entity hardware and software design process of conducting transactions associated with Emergency Vehicles or Police Administrative Citation using the Internet and E-commerce

Fig. 4 schematically show a three-tier system architecture layout for an entity hardware and software design process of conducting transactions associated with Parking Tickets or Parking Citations using the Internet and E-commerce.

Fig. 5 schematically shows a three-tier system architecture layout for an entity hardware and software design process of conducting transactions associated with Utilities (Water, sewer, property tax and/or Garbage) using the Internet and E-Commerce.

Fig. 6 schematically shows a three-tier system architecture layout for an entity hardware and software design process of conducting transactions using the Internet and E-Commerce.

### Detailed Description

Fig. 6 schematically shows an overview of a three-tier system architecture layout for an entity hardware and software design process of conducting transactions, for example associated with Utilities, using the Internet and E-Commerce. Different preferred embodiments of this invention are described below.

In one embodiment, this invention relates to a system to enable one to pay a Police Administration Ticket or Police Administration Citation via the Internet. The system involves a Web Browser who access the Corporate in-house Server in real-time which collects the necessary information and then interacts with the Corporate database for retrieval of vital information and amount balances to satisfy the payment of the Police Administration Citation or Emergency Vehicles. This information is then confirmed and used to contact Banks and other Financial Institutions for payment of the Police Administration Citation or Police Administrative Violation. The Corporate database is update with all necessary information to satisfy the Police Administration Citation or Police Administrative Violation. The Funds are transferred into the Corporate Bank and a validation voucher is issued via E-mail to the customer and Corporate notifying of this transaction. This invention relates to a system, which allows one to pay Police Administration ticket or Police Administration Citation via the Internet in a very convenient manner. This is expected to help the local Police Administration office or City, County, State, Judicial Department in collecting the funds in a more timely manner, allowing the payee to continue to be a good citizen, and possibly be able to track the payments with less number of staffs.

In one embodiment, this invention involves the payment of a Police Administration Ticket or Police Administration Citation issued by a City, County, State, Judicial Department or Office of the Court Clerks to be paid over the Internet using E-commerce and TPA's (Trading Partner agreements), banks and Financial Institutions. This standard method for making payments will be replaced with Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT); this will be done in real-time. Their License Plate Number and necessary information would be updated to the Corporate database and the appropriate funds (retrieved from Corporate database) would have to be paid. Once the payment has been made The Office of the Court of Clerks, Justice department or City, County, State, County Judicial Department would then be notified of the payment and funds would be transferred into their bank account. The customer

would receive a verification number that the process was completed successfully. If the payment is made during the original time period then no further action is warranted; however if the warrant is issued, then the Department of Motor Vehicle would also have to be notified of the satisfaction of debt. The system also connects multiple users across a variety of systems. This system enables the delivery of secure Internet payment capabilities to the Corporate of this service provider. Payment Manager enables ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), Banks and Financial Institutions to quickly and easily link the Customer to Corporation payment processors to handle the complex e-commerce transactions. The software integrates with virtually all business processes and applications, and works with multiple operating systems and databases using customized software for uploading and downloading of necessary information files.

In one embodiment, this invention relates to a system, which allows one to pay Traffic Violations ticket or Citation via the Internet in a very convenient manner. This is expected to help the local city police department in collecting the funds in a more timely manner, and possibly be able to track the payments with less number of staffs.

In one embodiment, this invention involves the payment of a Traffic Ticket or Traffic Citation issued by a City Police Department to be paid over the Internet using E-commerce, banks and Financial Institutions. This standard method for making payments will be replaced with Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). This will be done in real-time. Once the payment has been made the City Police Department (Corporate) would then be notified of the payment and funds would be transferred into their bank account. The customer would receive a verification number that the process was completed successfully. The system also connects multiple users across a variety of systems. This system enables the delivery of secure Internet payment capabilities to the Corporate of this service provided. Payment Manager enables ISP's, CSPs, Asp's, Banks and Financial Institutions to quickly and easily link the Customer to Corporation payment processors to handle today's complex e-commerce transactions. The software integrates with virtually all business processes and applications, and works with multiple operating systems and databases using customized software for uploading of necessary information files.

In one embodiment, this invention relates to a system, which allows one to pay Court Citation, Court Tickets, and Court Warrant via the Internet in a very convenient manner. This is

expected to help the local Court of Clerks or City Judicial Department in collecting the funds in a more timely manner, allow the payee to continue to be a good citizen and be able to track the payments with less number of staffs.

In one embodiment, this invention involves the payment of a Court Ticket, Court Warrant or Court Citation issued by a City Judicial Department or Office of the Court of Clerks to be paid over the Internet using E-commerce and TPA's(Trading Partner agreements), banks and Financial Institutions. This standard method for making payments will be replaced with Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT), this will be done in real-time. Their name and necessary information would be updated to the Corporate database and the appropriate funds (retrieved from Corporate database) would have to be paid. Once the payment has been made The Office of Court of Clerks, City, County Department would then be notified of the payment and funds would be transferred into their bank account. The customer would receive a verification number that the process was completed successfully via e-mail.

The system also connects multiple users across a variety of systems. This system enables the delivery of secure Internet payment capabilities to the Corporate of this service provided. Payment Manager enables ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's(Secure Hypertext Transfer Protocol), Banks and Financial Institutions to quickly and easily link the Customer to Corporation payment processors to handle the complex e-commerce transactions. The software integrates with virtually all business processes and applications, and works with multiple operating systems and databases using customized software for uploading and downloading of necessary information files.

In one embodiment, this invention relates to a system which allows one to pay Parking Violations ticket or Citation and sign-up for the drivers training school, via the Internet in a very convenient manner. This is expected to help the local Parking Violations office or City Judicial Department in collecting the funds in a more timely manner, and possibly be able to track the payments with less number of staffs.

In one embodiment, this invention involves the payment of a Parking Ticket or Parking Citation issued by a City Judicial Department or Office of Parking Violations to be paid over the Internet using E-commerce and TPA's(Trading Partner agreements), banks and Financial Institutions. This standard method for making payments will be replaced with Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT), this will be done in real-time. If the

individual chooses to sign-up for the driver's training school, their name and necessary information would also be updated to the Corporate database and the appropriate funds (retrieved from Corporate database) would have to be paid. Once the payment has been made The Office of Parking Violations/City Judicial Department (Corporate) would then be notified of the payment and funds would be transferred into their bank account. The customer would receive a verification number that the process was completed successfully. The system also connects multiple users across a variety of systems. This system enables the delivery of secure Internet payment capabilities to the Corporate of this service provided. Payment Manager enables ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), Banks and Financial Institutions to quickly and easily link the Customer to Corporation payment processors to handle today's complex e-commerce transactions. The software integrates with virtually all business processes and applications, and works with multiple operating systems and databases using customized software for uploading and downloading of necessary information files.

In one embodiment, this invention relates to a system, which allows one to pay a Utility bill (Water/ Garbage) via the Internet in a very convenient manner. This is expected to help the local City, County, State, Accounting Departments in collecting the funds in a more timely manner, allowing the payee to continue to be a good citizen, and possibly be able to track the payments with less number of staffs.

In one embodiment, this invention involves the payment of a Utilities (Water/Garbage) bill to be paid over the Internet using E-commerce and TPA's (Trading Partner agreements), banks and Financial Institutions. This standard method for making payments will be replaced with Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT), this will be done in real-time. The information would be updated to the Corporate database and the appropriate funds (retrieved from Corporate database) would have to be paid. Once the payment has been made The Office of the Finance Director or other appropriate official Department would then be notified of the payment and funds would be transferred into their bank account. The customer would receive a verification number that the process was completed successfully. If the payment is made during the original time period then no further action is warranted; however if the lien were issued, then the Office of Court of Clerks would also have to be notified of the satisfaction of debt. The system also connects multiple users across a variety of systems. This system

enables the delivery of secure Internet payment capabilities to the Corporate of this service provider. Payment Manager enables ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), Banks and Financial Institutions to quickly and easily link the Customer to Corporation payment processors to handle the complex e-commerce transactions. The software integrates with virtually all business processes and applications, and works with multiple operating systems and databases using customized software for uploading and downloading of necessary information files.

Table 1 shows the preferred means for various means for doing different functions of this invention.

**Table 1**

means for generating a receipt and a payment remittance information	Internet, Smart cards, Wireless access device, smart crystals, hand-held display screens, fiber optics, VAN (Value Added Network) database,digital optical readers, digital print readers, broadband network, DVD-ROM, CD-RW, Telecommunication line cord, bio-crystal network, Secure Socket Layers (SSL)--order of magnitude better, keyboard, bar codes, laser scanners, User Interface without Server (UIwS) and computer-executable instructions
means for enabling an entity to authorize a payment due on the receipt	Computer instructions, computer generated instructions, VAN (Value Added Network) database, keyboard, Secure Socket Layers (SSL)—order of magnitude better, instructions initiated by a entity, User Interface without Server (UIwS), PPP's (Point-to-Point Protocol),



	SHTTP's (Secure Hypertext Transfer Protocol) and
means for associating the payment with the payment remittance information	Computer instructions, computer generated instructions, VAN (Value Added Network) database, instructions initiated by a entity and keyboard
means for storing a receipt and a payment remittance information, the payment remittance information comprising a structured remittance data that is kept hidden from an entity	Computer storage disk drive, data crystals, VAN (Value Added Network) database, artificial intelligence, wireless storage networks, smart cards and keyboard
means for presenting the receipt to the entity without revealing the structured remittance data;.	Computer storage disk drive, data crystals, VAN (Value Added Network) database, artificial intelligence, Secure Socket Layers (SSL)—order of magnitude better, wireless storage networks, smart cards, ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), keyboard and User Interface without Server (UiwS)
means for enabling the entity to specify payment instructions comprising at least an amount to be paid on the receipt and an account at a payor from which to draw the amount while prohibiting the entity from altering data contained in the structured remittance data;	Computer storage disk drive, data crystals, VAN (Value Added Network) database, artificial intelligence, smart Secure Sockets Layer (SSSL), wireless storage networks, smart cards, ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), keyboard and User Interface without Server (UIwS)

means for associating the payment instructions with the structured remittance data;	VAN (Value Added Network) database, SHTTP's (Secure Hypertext Transfer Protocol) and keyboard
means for transmitting the payment instructions to the payor to initiate payment of the amount;	A computer, a cellular telephone, a portal, a network, Internet, smart cards, VAN (Value Added Network) database, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, bar codes, data crystals, keyboard, artificial intelligence, laser scanners, Secure Socket Layers (SSL)—order of magnitude better, ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), User Interface without Server (UIwS) and computer-executable instructions.
means for routing the amount to a payee	VAN (Value Added Network) database, Secure Socket Layers (SSL)—order of magnitude better, keyboard and User Interface without Server (UiwS)
means for transmitting the receipt and the payment remittance information to at least an intermediary	A computer, a cellular telephone, a portal, Secure Socket Layers (SSL)--order of magnitude better, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical

	readers, digital print readers, a broadband network, ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, VAN (Value Added Network) database, keyboard, bar codes, data crystals, artificial intelligence, laser scanners, User Interface without Server (UIwS), keyboard and computer-executable instructions.
means for specifying a payment date	Computer storage disk drive, data crystals, artificial intelligence, Keyboard, Secure Socket Layers (SSL)--order of magnitude better, wireless storage networks, smart cards, VAN (Value Added Network) database, PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), keyboard and User Interface without Server (UIwS)
means for designating the payee	Secure Socket Layers (SSL)--order of magnitude better, VAN (Value Added Network) database, SHTTP's (Secure Hypertext Transfer Protocol), keyboard and User Interface without Server (UIwS)

<p>comprising means for submitting the payment instructions an account clearing house payment system or a credit card processing system</p>	<p>A computer, a cellular telephone, Secure Socket Layers (SSL)—order of magnitude better, a portal, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, VAN (Value Added Network) database, bar codes, data crystals, artificial intelligence, laser scanners, ISP's (Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), User Interface without Server (UIwS), keyboard and computer-executable instructions.</p>
<p>means for transmitting non-billing information with the receipt</p>	<p>A computer, a cellular telephone, a portal, Secure Socket Layers (SSL)--order of magnitude better, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, VAN (Value Added Network) database, a telecommunication line cord, a bio-crystal network, bar codes, data crystals, artificial intelligence, laser scanners,</p>

	ISP's(Internet Service providers), PPP's (Point-to-Point Protocol), SHTTP's (Secure Hypertext Transfer Protocol), User Interface without Server (UIwS), keyboard and computer-executable instructions.
means for encrypting the receipt and the payment instructions	Secure Socket Layers (SSL)--order of magnitude better, VAN (Value Added Network) database, keyboard and SHTTP's (Secure Hypertext Transfer Protocol)
means for digitally signing the receipt	Secure Socket Layers (SSL)—order of magnitude better, VAN (Value Added Network) database, keyboard and SHTTP's (Secure Hypertext Transfer Protocol) and User Interface without Server (UiwS)
means for authenticating the receipt	Secure Socket Layers (SSL)—order of magnitude better, VAN (Value Added Network) database, keyboard and SHTTP's (Secure Hypertext Transfer Protocol)

### **Example 1**

The following, in conjunction with Figure 1, describes a typical example of how this system and the process work. A Police Administration Police Administration Citation/Police Administration Ticket is issued. The customer during the next 21 days, using a Web Browser, logs into the Corporation system. He/She then enters either the Police Administration Citation Number or License Plate Number or Driver's license Number and email address or City, County, State, of issuance. The Corporation database locates this Police Administration Citation and

displays the amount charged by the City, County, State, Village or Township to satisfy this  
Emergency Police Administration Citation / Administration Ticket. If the customer agrees to  
pay the amount charged, the Payment options are displayed for them. If not other data has been  
already loaded into memory for a fast retrieval to be displayed. He/ She then enters a valid  
5 Credit Card number, Bank routing number and Account number, ATM card number, smart card,  
or Cyber Cash option. The system then validates this transaction. Upon payment the  
Corporation database time-stamp's and date-stamp's this voucher and transmits it to the City,  
County, State, Village or Township where the issuance occurred; it also notifies the state  
Department of Motor Vehicle of the payment against the Driver's license number. The funds are  
10 also transferred at the same time. The customer receives an e-mail that the Police Administration  
Citation or Emergency Vehicle Ticket has been satisfied.

Step 1: A Police Administration Citation number or the individual License Plate Number  
or the City, County, State, of issuance or driver license number and e-mail address and a Unique  
15 identification number or Birth date are entered, in a encrypted form through a HTTP server into a  
VAN (Value Added Network) database where a digital signature is created. The Corporate then  
searches the appropriate databases to locate the necessary information using a Gateway link, for  
protocol conversion, with firewalls in place for security. If the Police Administration Citation/  
Ticket has been transferred to the Department of Motor Vehicles, then a Back-end process is  
20 invoked and the necessary information is retrieved using an encrypted form through an HTTP  
server in to the Corporate database.

Step 2. A Police Administration Citation retrieval system is disclosed that improves a  
database system's response time so that a user's request to view information is serviced quickly.  
25 During the time the user spends viewing the displayed information, other information that the  
user is likely to read or study later is preloaded into memory. If the user does later request this  
information, this information can be written to the display very quickly because the information  
need not be retrieved from the database. This system takes advantage of the fact that it is  
possible to accurately locate the information that the user will request. Adaptive prediction  
30 schemes can be employed as an aid in determining what information the user will request from

the Department of Motor Vehicle, Office of Police Administration or Judicial Department (Corporate) where the Police Administration Citation was issued.

Step 3: A method for paying your Police Administration Citation over the Internet is comprised by identifying a digital signature to be paid. A payment price for the Police Administration Citation is stated using Secure Sockets Layer (SSL) and said payment identifier, querying a database of Government Entity (E-Government)-defined rules provided by E-government to determine if said ticket is to be paid to said citizen for said price, said E-government-defined rules including prices which are concealed from said citizen. After the stated step, the customer is then asked to enter an amount of payment, if it is different from the stated amount. An authenticated payment request is sent to the Corporate using SSL with encryption. The Corporate decrypts the desired Police Administration Citation number, driver's license number, or License Plate Number and calculates a first cryptographic dollar amount for the encrypted Police Administration Citation. The encrypted digital Police Administration Citation and the first cryptographic dollar amount together with a timestamp and date-stamp are then transmitted to the customer. This information is then decrypted and the customer confirms a second cryptographic dollar amount and Police Administration Citation number which is also encrypted. The customer creates an electronic payment order containing information identifying the transaction, the second cryptographic dollar amount, Police Administration Citation number, City, County, State of issuance, date-stamp and the timestamp. The electronic payment order is transmitted to the Banks and Financial Institutions using CGI script for an authorization request. The Corporate compares the first and second cryptographic checksums to ensure that they match, and if so, the Corporate adds an electronic signature and a decryption key to the electronic payment order. The Corporate submits the Corporate signed electronic payment order and the key to an account server for review. The account server reviews the information in the electronic payment order and sends a message, including the key if the review is positive, to the Corporate. Email Notification - automatically sends email to the customer informing them of the payment of the Police Administration Citation and a confirmation number. The Office of Police Administration / City, County, State, Judicial Department's or Department of Motor Vehicles database is then updated with the necessary information to satisfy the Police Administration Citation issued using the decryption key.



### Example 2

The following, in conjunction with Figure 2, describes a typical example of how this system and the process work. A Citation/Traffic Ticket is issued. The customer during the next 45 days, using a Web Browser, logs into the Corporation system. He/She then enters either the Citation Number or Name, Driver's license Number, Unique identification number or Birth date and City of Citation issued. The Corporation database locates this Citation and displays the amount charged by the City, Village or Township to satisfy this Citation/Traffic Ticket. If the customer agrees, the Payment options are displayed for them. If not other data has been already loaded into memory for a fast retrieval to be displayed. He/She then enters a valid Credit Card number, Bank routing number and Account number, ATM card number, smart card or Cyber Cash option. The system then validates this transaction. Upon payment the Corporation databases time stamps and date-stamps this voucher and transmits it to the City, Village or Township where the issuance occurred. The funds are also transferred at the same time. The customer receives e-mail that the citation/traffic ticket has been satisfied. The City, Village, Township or County receives a notification via email or printer for reconciliation purposes.

Step 1: A citation number or a name or a city of issuance or driver license number or an e-mail address or a Unique identification number or Birth date are entered in a encrypted form through a HTTP server into a VAN database where a digital signature is created. The Corporate then searches the appropriate database to locate the necessary information using a Gateway link, for protocol conversion, with firewalls in place for security.

Step 2. A citation retrieval system is disclosed that improves a database system's response time so that a user's request to view information is serviced quickly. During the time the user spends viewing the displayed information, other information that the user is likely to read or study later is preloaded into memory. If the user does later request this information, this information can be written to the display very quickly because the information need not be retrieved from the database. The invention takes advantage of the fact that it is possible to accurately locate the information that the user will request. Adaptive prediction schemes can be

employed as an aid in determining what information the user will request from the Police Department (Corporate) where the citation was issued.

Step 3: A method for paying your citation over the Internet is comprised by identifying a digital signature to be paid. A payment price for the citation is stated using Secure Sockets Layer (SSL) and said payment identifier, querying a database of Government Entity (E-Government)-defined rules provided by E-government to determine if said ticket is to be paid to said citizen for said price, said E-government-defined rules including prices which are concealed from said citizen. After the stated step, the customer is then asked to enter an amount of payment, if it is different from the stated amount. An authenticated payment request is sent to the Corporate using SSL with encryption. The Corporate decrypts the desired citation number, driver's license number, or name and calculates a first cryptographic dollar amount for the encrypted citation. The encrypted digital citation and the first cryptographic dollar amount together with a timestamp and date-stamp are then transmitted to the customer. This information is then decrypted and the customer confirms a second cryptographic dollar amount and citation number, which is also encrypted. The customer creates an electronic payment order containing information identifying the transaction, the second cryptographic dollar amount, citation number, city of issuance, date-stamp and the timestamp. The electronic payment order is transmitted to the Banks and Financial Institutions using CGI script for an authorization request. The Corporate compares the first and second cryptographic checksums to ensure that they match, and if so, the Corporate adds an electronic signature and a decryption key to the electronic payment order. The Corporate submits the Corporate signed electronic payment order and the key to an account server for review. The account server reviews the information in the electronic payment order and sends a message, including the key if the review is positive, to the Corporate. Email Notification - automatically sends email to the customer informing them of the payment of the citation and a confirmation number. The City Police department's database is then updated with the necessary information to satisfy the Citation issued using the decryption key.

### **Example 3**

The following, in conjunction with Figure 3, describes a typical example of how this system and the process work. A Court Tickets/ Court Warrant or Court Citation is issued. The

customer during the next 21 days, using a Web Browser, logs into the Corporation system.

He/She then enters either the Citation Number or Name, Unique identification number or Birth date and City of Citation issued. The Corporation database locates this Citation and displays the amount charged by the State, County, Village or Township to satisfy this Citation, Warrant or Ticket. If the customer agrees to pay the fine charged, the Payment options are displayed for them. If not other data has been already loaded into memory for a fast retrieval to be displayed. He/ She then enters a valid Credit Card number or Bank routing number and Account number or ATM card number, smart card or Cyber Cash option. The system then validates this transaction. Upon payment the Corporation database time stamps and date-stamps this voucher and transmits it to the State, County, State, Village or Township where the issuance occurred it also notifies of the Local Police Department if necessary of the payment against the Driver's license number of the individual who received the ticket, warrant or citation. The funds are also transferred at the same time. The customer receives an e-mail that the Citation, Warrant or Ticket has been satisfied.

Step 1: A citation number or the individual name and the City of issuance and driver license number are entered, in a encrypted form through a HTTP server into a VAN (Value Added Network) database where a digital signature is created. The Corporate then searches the appropriate databases to locate the necessary information using a Gateway link, for protocol conversion, with firewalls in place for security. If the Citation, Warrant or Ticket has been transferred to the Police Department, then a Back-end process is invoked and the necessary information is retrieved using a encrypted form through a HTTP server in to the Corporate database.

Step 2. A citation retrieval system is disclosed that improves a database system's response time so that a user's request to view information is serviced quickly. During the time the user spends viewing the displayed information, other information that the user is likely to read or study later is preloaded into memory. If the user does later request this information, this information can be written to the display very quickly because the information need not be retrieved from the database. The system takes advantage of the fact that it is possible to accurately locate the information that the user will request. Adaptive prediction schemes can be

employed as an aid in determining what information the user will request from the Police Department, Office of Court of Clerks or Financial Institutions (Corporate) where the citation was issued.

5           Step 3: A method for paying your citation over the Internet is comprised by identifying a digital signature to be paid. A payment price for the citation is stated using Secure Sockets Layer (SSL) and said payment identifier, querying a database of Government Entity (E-Government)-defined rules provided by E-government to determine if said ticket is to be paid to said citizen for said price, said E-government-defined rules including prices which are concealed  
10           from said citizen. After the stated step, the customer is then asked to enter an amount of payment, if it is different from the stated amount. An authenticated payment request is sent to the Corporate using SSL with encryption. The Corporate decrypts the desired citation number, driver's license number, or name and calculates a first cryptographic dollar amount for the encrypted citation. The encrypted digital citation and the first cryptographic dollar amount  
15           together with a timestamp and date-stamp are then transmitted to the customer. This information is then decrypted and the customer confirms a second cryptographic dollar amount and citation number, which is also encrypted. The customer creates an electronic payment order containing information identifying the transaction, the second cryptographic dollar amount, citation number, City of issuance, date-stamp and the timestamp. The electronic payment order is transmitted to  
20           the Banks and Financial Institutions using CGI script for an authorization request. The Corporate compares the first and second cryptographic checksums to ensure that they match, and if so, the Corporate adds an electronic signature and a decryption key to the electronic payment order. The Corporate submits the Corporate signed electronic payment order and the key to an account server for review. The account server reviews the information in the electronic payment  
25           order and sends a message, including the key if the review is positive, to the Corporate. Email Notification - automatically sends email to the customer informing them of the payment of the citation and a confirmation number. The Office of Court Of Clerks / City Judicial Department's or Police Department database is then updated with the necessary information to satisfy the Citation, Warrant or Ticket issued using the decryption key.

#### **Example 4**

The following describes a typical example of how this system and the process work. A Parking Citation/Parking Ticket is issued. The customer during the next 21 days, using a Web Browser, logs into the Corporation system. He/She then enters either the Citation Number or Name, Driver's license Number, Unique identification number or Birth date and City of Citation issued. The Corporation database locates this Citation and displays the amount charged by the City, Village or Township to satisfy this Citation / Parking Tickets. If the customer agrees to pay the fine charged, the Payment options are displayed for them. If not other data has been already loaded into memory for a fast retrieval to be displayed, and the option of Drivers Training School is shown with the amount necessary to sign-up for it. He/ She then enters a valid Credit Card number, Bank routing number and Account number, ATM card number, smart card or Cyber Cash option. The system then validates this transaction. Upon payment the Corporation database time stamps and date-stamps this voucher and transmits it to the City, Village or Township where the issuance occurred it also notifies the state Department of Motor Vehicle of the payment against the Driver's license number of the individual who received the ticket/citation. The funds are also transferred at the same time. The customer receives an e-mail that the Citation/Parking Tickets has been satisfied.

Step 1: A citation number or the individual name or the City of issuance or driver license number or an e-mail address or a Unique identification number or Birth date are entered, in a encrypted form through a HTTP server into a VAN (Value Added Network) database where a digital signature is created. The Corporate then searches the appropriate databases to locate the necessary information using a Gateway link, for protocol conversion, with firewalls in place for security. If the Citation/ Ticket has been transferred to the Department of Motor Vehicles, then a Back-end process is invoked and the necessary information is retrieved using an encrypted form through an HTTP server in to the Corporate database and said payment identifier, querying a database of Government Entity (E-Government)-defined rules provided by E-government to determine if said ticket is to be paid to said citizen for said price, said E-government-defined rules including prices which are concealed from said citizen.

Step 2. A citation retrieval system is disclosed that improves a database system's response time so that a user's request to view information is serviced quickly. During the time

the user spends viewing the displayed information, other information that the user is likely to read or study later is preloaded into memory. If the user does later request this information, this information can be written to the display very quickly because the information need not be retrieved from the database. The invention takes advantage of the fact that it is possible to accurately locate the information that the user will request. Adaptive prediction schemes can be employed as an aid in determining what information the user will request from the Department of Motor Vehicle, Office of Parking Violations or Judicial Department (Corporate) where the citation was issued.

Step 3: A method for paying your citation over the Internet is comprised by identifying a digital signature to be paid. A payment price for the citation is stated using Secure Sockets Layer (SSL). After the stated step, the customer is then asked to enter an amount of payment, if it is different from the stated amount. An authenticated payment request is sent to the Corporate using SSL with encryption. The Corporate decrypts the desired citation number, driver's license number, or name and calculates a first cryptographic dollar amount for the encrypted citation. The encrypted digital citation and the first cryptographic dollar amount together with a timestamp and date-stamp are then transmitted to the customer. This information is then decrypted and the customer confirms a second cryptographic dollar amount and citation number, which is also encrypted. The customer creates an electronic payment order containing information identifying the transaction, the second cryptographic dollar amount, citation number, City of issuance, date-stamp and the timestamp. The electronic payment order is transmitted to the Banks and Financial Institutions using CGI script for an authorization request. The Corporate compares the first and second cryptographic checksums to ensure that they match, and if so, the Corporate adds an electronic signature and a decryption key to the electronic payment order. The Corporate submits the Corporate signed electronic payment order and the key to an account server for review. The account server reviews the information in the electronic payment order and sends a message, including the key if the review is positive, to the Corporate. Email Notification - automatically sends email to the customer informing them of the payment of the citation and a confirmation number. The Office of Parking Violations / City Judicial Department's or Department of Motor Vehicles database is then updated with the necessary information to satisfy the Citation issued using the decryption key.

### **Example 5**

The following, in conjunction with Figure 5, describes a typical example of how this system and the process work. A invoice is generated, the customer during the next 30 days, using a Web Browser, logs into the City/County/Corporation system. He/She then enters either the invoice number or property address or City or County of issuance and e-mail address. The City/County/Corporation database locates this invoice number and displays the amount charged by the City, County, Village or Township to satisfy this invoice. If the customer agrees to pay the amount charged, the Payment options are displayed for them. If not other data has been already loaded into memory for a fast retrieval to be displayed. He/ She then enters a valid Credit Card number, Bank routing number and Account number, ATM card number, smart card or Cyber Cash option. The system then validates this transaction. Upon payment the Corporation database time stamps and date-stamps this voucher and transmits it to the City, County, State, Village or Township where the issuance occurred; it also notifies the state Department of Motor Vehicle of the payment against the Driver's license number. The funds are also transferred at the same time. The customer receives an e-mail that the invoice has been satisfied.

Step 1: A Invoice number or the individual property address and the City, State, are entered, in an encrypted form through a HTTP server into a VAN (Value Added Network) database where a digital signature is created. The Corporate then searches the appropriate databases to locate the necessary information using a Gateway link, for protocol conversion, with firewalls in place for security. If the Invoice has been transferred to the Office for the Court of Clerks, then a Back-end process is invoked and the necessary information is retrieved using an encrypted form through an HTTP server in to the City/County/Corporate database.

Step 2. A Invoice retrieval system is disclosed that improves a database system's response time so that a user's request to view information is serviced quickly. During the time the user spends viewing the displayed information, other information that the user is likely to read or study later is preloaded into memory. If the user does later request this information, this information can be written to the display very quickly because the information need not be



retrieved from the database. This system takes advantage of the fact that it is possible to accurately locate the information that the user will request. Adaptive prediction schemes can be employed as an aid in determining what information the user will request from the City/County/Corporation where the Invoice was issued.

5

Step 3: A method for paying your Invoice over the Internet is comprised by identifying a digital signature to be paid. A payment price for the Invoice is stated using Secure Sockets Layer (SSL) and said payment identifier, querying a database of Government Entity (E-Government)-defined rules provided by E-government to determine if said ticket is to be paid to said citizen for said price, said E-government-defined rules including prices which are concealed from said citizen. After the stated step, the customer is then asked to enter an amount of payment, if it is different from the stated amount. An authenticated payment request is sent to the Corporate using SSL with encryption. The Corporate decrypts the desired Invoice number, property address and calculates a first cryptographic dollar amount for the encrypted Invoice. The encrypted digital Invoice and the first cryptographic dollar amount together with a timestamp and date-stamp are then transmitted to the customer. This information is then decrypted and the customer confirms a second cryptographic dollar amount and Invoice number, which is also encrypted. The customer creates an electronic payment order containing information identifying the transaction, the second cryptographic dollar amount, Invoice number, City, State of issuance, date-stamp and the timestamp. The electronic payment order is transmitted to the Banks and Financial Institutions using CGI script for an authorization request. The Corporate compares the first and second cryptographic checksums to ensure that they match, and if so, the Corporate adds an electronic signature and a decryption key to the electronic payment order. The Corporate submits the Corporate signed electronic payment order and the key to an account server for review. The account server reviews the information in the electronic payment order and sends a message, including the key if the review is positive, to the Corporate. Email Notification - automatically sends email to the customer informing them of the payment of the and a confirmation number. The Accounting office or other relevant office for the City, County, State database is then updated with the necessary information to satisfy the Invoice issued using the decryption key.

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The above description is presented to enable a person skilled in the art to make and use the invention, and is provided in the context of a particular application and its requirements. Various modifications to the preferred embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments and applications without departing from the spirit and scope of the invention. Thus, this invention is not intended to be limited to the embodiments shown, but is to be accorded the widest scope consistent with the principles and features disclosed herein.

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CONFIDENTIAL

**What is claimed is:**

1. A method for conducting a transaction using a medium, comprising:  
generating a receipt and a payment remittance information;  
5 enabling an entity to authorize a payment due on the receipt; and  
associating the payment with the payment remittance information;  
wherein the payment remittance information is arranged within a data structure according  
to a prescribed format, the data structure comprising one or more open data fields to hold data  
that the entity can enter, and the payment remittance information further comprises a structured  
10 remittance data that is kept hidden from the entity.

2. A method of executing computer-executable instructions residing in or on a processor  
using a medium, comprising:

storing a receipt and a payment remittance information in a memory, the payment  
15 remittance information comprising a structured remittance data that is kept hidden from an  
entity;

presenting the receipt to the entity without revealing the structured remittance data;  
enabling the entity to specify payment instructions comprising at least an amount to be  
20 paid on the receipt and an account at a payor from which to draw the amount while prohibiting  
the entity from altering data contained in the structured remittance data;

associating the payment instructions with the structured remittance data;  
communicating the payment instructions from the memory to the payor to initiate  
25 payment of the amount; and  
routing the amount to a payee.

3. The method of claim 1, further comprising:  
presenting the receipt to the entity without revealing the structured remittance data;  
communicating payment instructions to a payor to initiate payment of an amount to be paid on  
the receipt; and routing the amount to a payee;  
30 wherein the enabling the entity comprises specifying the payment instructions comprising  
at least the amount and an account at the payor from which to draw the amount.

4. The method of claim 1, 2 or 3, further comprising communicating the receipt and the payment remittance information to at least an intermediary.

5. The method of claim 1, 2 or 3, wherein the receipt is selected from the group consisting of a traffic ticket, a citation, a utility bill, a court ticket, a court warrant, hospital receipt, a rental receipt, a property tax receipt, a property transfer tax receipt, a business permits receipt, a business license receipt, a business license renewal receipt, an administrative citation receipt, a facility rental receipt, a class sign-up receipt, a building permit receipt, a planning permit receipt, an airport use receipt, a roads and highway receipt, a fire department receipt, a waste disposal receipt, a recycling waste bill, a marriage license receipt, a birth certificate receipt, a death certificate receipt, a lien receipt, a passport application receipt, a passport renewal receipt, a visa application receipt, a visa renewal receipt, a land development maps receipt, an United States Geological Service Maps Division receipt, an Internal Revenue Service receipt, a State Tax Board receipt, a Driver's license renewal receipt, a Vehicle License tags renewal receipt, a car insurance receipt, an electric bill, a phone bill, a gas bill, a water receipt, a business tax receipt and a parking ticket; and

wherein the medium optionally comprises a memory device storing a program and is selected from the group consisting of a computer, a cellular telephone, a portal, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, bar codes, Secure Sockets Layer, Hyper text Socket Layer, data crystals, artificial intelligence, laser scanners and computer-executable instructions.

6. The method of claim 2 or 3, wherein the communicating payment instructions to a payor is performed electronically.

7. The method of claim 4, wherein the communicating the receipt and the payment remittance information is performed electronically.

8. The method of claim 2 or 3, wherein the routing the amount is performed electronically.

5 9. The method of claim 2 or 3, wherein the presenting the receipt is performed electronically.

10. The method of claim 2 or 3, wherein the payor is selected from the group consisting of a bank, an entity and a credit card facility.

10 11. The method of claim 2 or 3, wherein the payee is selected from the group consisting of an intermediary, a government agency, a government department, a business, citizens and a collection agency.

15 12. The method of claim 2 or 3, wherein the enabling the entity further comprises specifying a payment date.

13. The method of claim 2 or 3, wherein the routing the amount to a payee is without intervention of the entity.

20 14. The method of claim 2 or 3, further comprising designating the payee.

15. The method of claim 2 or 3, further comprising submitting the payment instructions an account clearing house payment system or a credit card processing system.

25 16. The method of claim 2 or 3, further comprising communicating non-billing information with the receipt.

17. The method of claim 1, 2 or 3, further comprising encrypting the receipt and the payment instructions.

30 18. The method of claim 1, 2 or 3, further comprising digitally signing the receipt.

19. The method of claim 1, 2 or 3, further comprising authenticating the receipt.

20. The method of claim 4, wherein the entity is selected from the group consisting of a  
5 citizen, a business, an institution, an agency and an university.

21. A device, comprising:

means for generating a receipt and a payment remittance information;

means for enabling an entity to authorize a payment due on the receipt; and

10 means for associating the payment with the payment remittance information;

wherein the device conducts a transaction using a medium, and

wherein the payment remittance information is arranged within a data structure according  
to a prescribed format, the data structure comprising one or more open data fields to hold data  
that the entity can enter, and the payment remittance information further comprises a structured  
15 remittance data that is kept hidden from the entity.

22. A device, comprising:

means for storing a receipt and a payment remittance information, the payment  
remittance information comprising a structured remittance data that is kept hidden from an  
20 entity;

means for presenting the receipt to the entity without revealing the structured remittance  
data;

means for enabling the entity to specify payment instructions comprising at least an  
amount to be paid on the receipt and an account at a payor from which to draw the amount while  
25 prohibiting the entity from altering data contained in the structured remittance data; means for  
associating the payment instructions with the structured remittance data;

means for communicating the payment instructions to the payor to initiate payment of the  
amount; and

means for routing the amount to a payee.

23. The device of claim 21, further comprising:

means for presenting the receipt to the entity without revealing the structured remittance data; means for communicating payment instructions to a payor to initiate payment of an amount to be paid on the receipt; and means for routing the amount to a payee;

5 wherein the mean for enabling the entity comprises means for specifying the payment instructions comprising at least the amount and an account at the payor from which to draw the amount.

10 24. The device of claim 21, 22 or 23, further comprising means for communicating the receipt and the payment remittance information to at least an intermediary.

15 25. The device of claim 21, 22 or 23, wherein the receipt is selected from the group consisting of a traffic ticket, a citation, a utility bill, a court ticket, a court warrant, hospital receipt, a rental receipt, a property tax receipt, a property transfer tax receipt, a business permits receipt, a business license receipt, a business license renewal receipt, an administrative citation receipt, a facility rental receipt, a class sign-up receipt, a building permit receipt, a planning permit receipt, an airport use receipt, a roads and highway receipt, a fire department receipt, a waste disposal receipt, a recycling waste bill, a marriage license receipt, a birth certificate receipt, a death certificate receipt, a lien receipt, a passport application receipt, a passport renewal receipt, a visa application receipt, a visa renewal receipt, a land development maps receipt, an United States Geological Service Maps Division receipt, an Internal Revenue Service receipt, a State Tax Board receipt, a Driver's license renewal receipt, a Vehicle License tags renewal receipt, a car insurance receipt, an electric bill, a phone bill, a gas bill, a water receipt, a business tax receipt and a parking ticket.

25 26. The device of claim 22 or 23, wherein the means for communicating payment instructions to a payor is electronic.

30 27. The device of claim 24, wherein the means for communicating the receipt and the payment remittance information is electronic.



28. The device of claim 22 or 23, wherein the means for routing the amount is electronic.

29. The device of claim 22 or 23, wherein the means for presenting the receipt is electronic.

30. The device of claim 22 or 23, wherein the payor is selected from the group consisting of a bank, an entity and a credit card facility.

31. The device of claim 22 or 23, wherein the payee is selected from the group consisting of an intermediary, a government agency, a government department, a business, citizens and a collection agency.

32. The device of claim 22 or 23, wherein the means for enabling the entity further comprises means for specifying a payment date.

33. The device of claim 22 or 23, wherein the means for routing the amount to a payee is without intervention of the entity.

34. The device of claim 22 or 23, further comprising means for designating the payee.

35. The device of claim 22 or 23, further comprising means for submitting the payment instructions an account clearing house payment system or a credit card processing system.

36. The device of claim 22 or 23, further comprising means for communicating non-billing information with the receipt.

37. The device of claim 21, 22 or 23, further comprising means for encrypting the receipt and the payment instructions.

38. The device of claim 21, 22 or 23, further comprising means for digitally signing the receipt.

39. The device of claim 21, 22 or 23, further comprising means for authenticating the receipt.

40. The device of claim 24, wherein the entity is selected from the group consisting of a citizen, a business, an institution, an agency and an university.

41. The device of claim 21, 22 or 23, wherein the device is selected from the group consisting of a computer, a cellular telephone, a portal, a network, Internet, smart cards, a wireless access device, smart crystals, hand-held display screens, fiber optics, digital optical readers, digital print readers, a broadband network, a DVD-ROM, a CD-RW, a telecommunication line cord, a bio-crystal network, bar codes, Secure Sockets Layer, Hyper text Socket Layer, data crystals, artificial intelligence, laser scanners and computer-executable instructions.

#### **Abstract**

A process and a device for conducting electronic transactions provides a more effective and efficient way to make a payment over the Internet. This process and device could be used to pay, for example, a Police Administration Ticket or Police Administration Citation via the Internet.

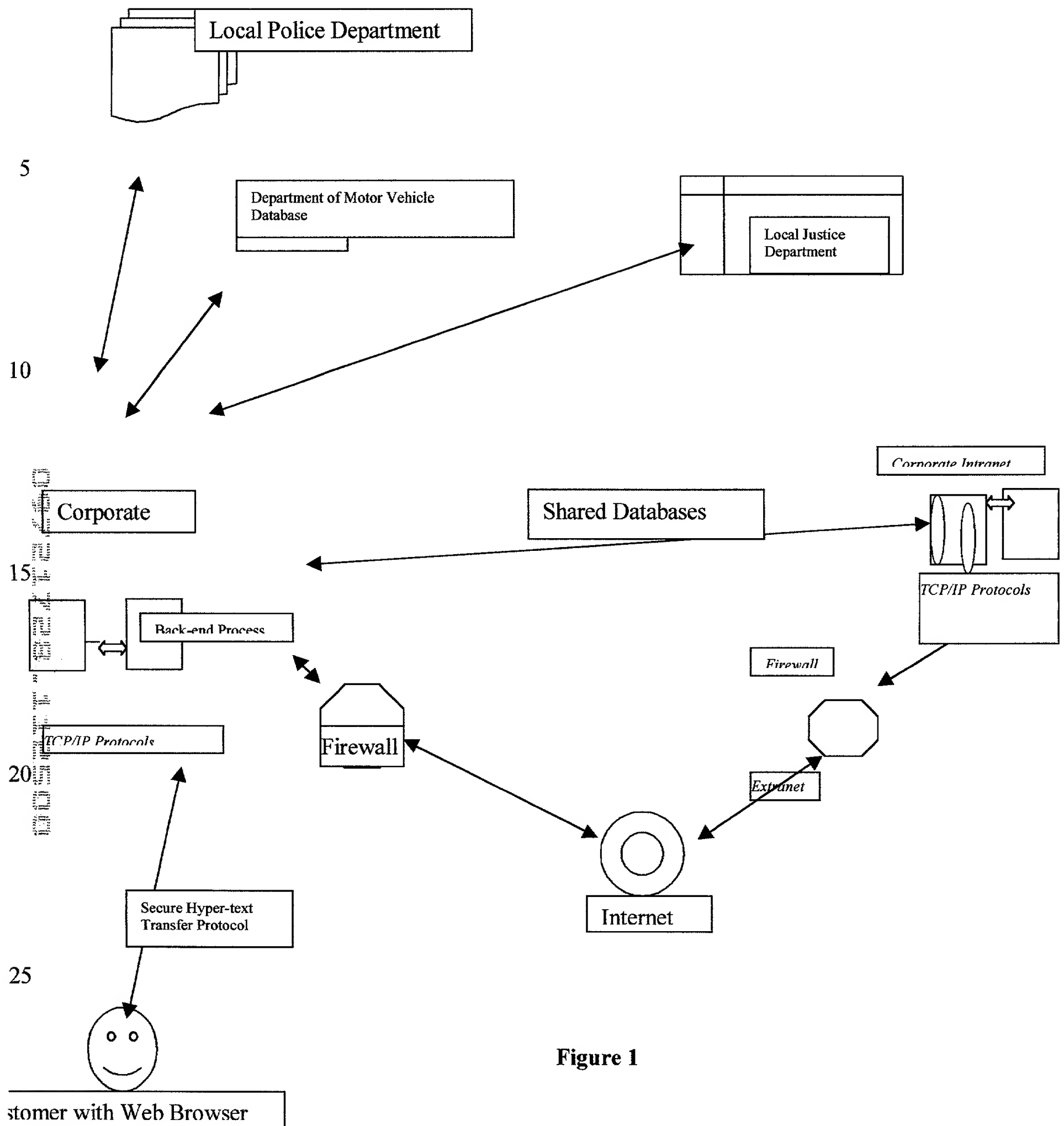


Figure 1

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20

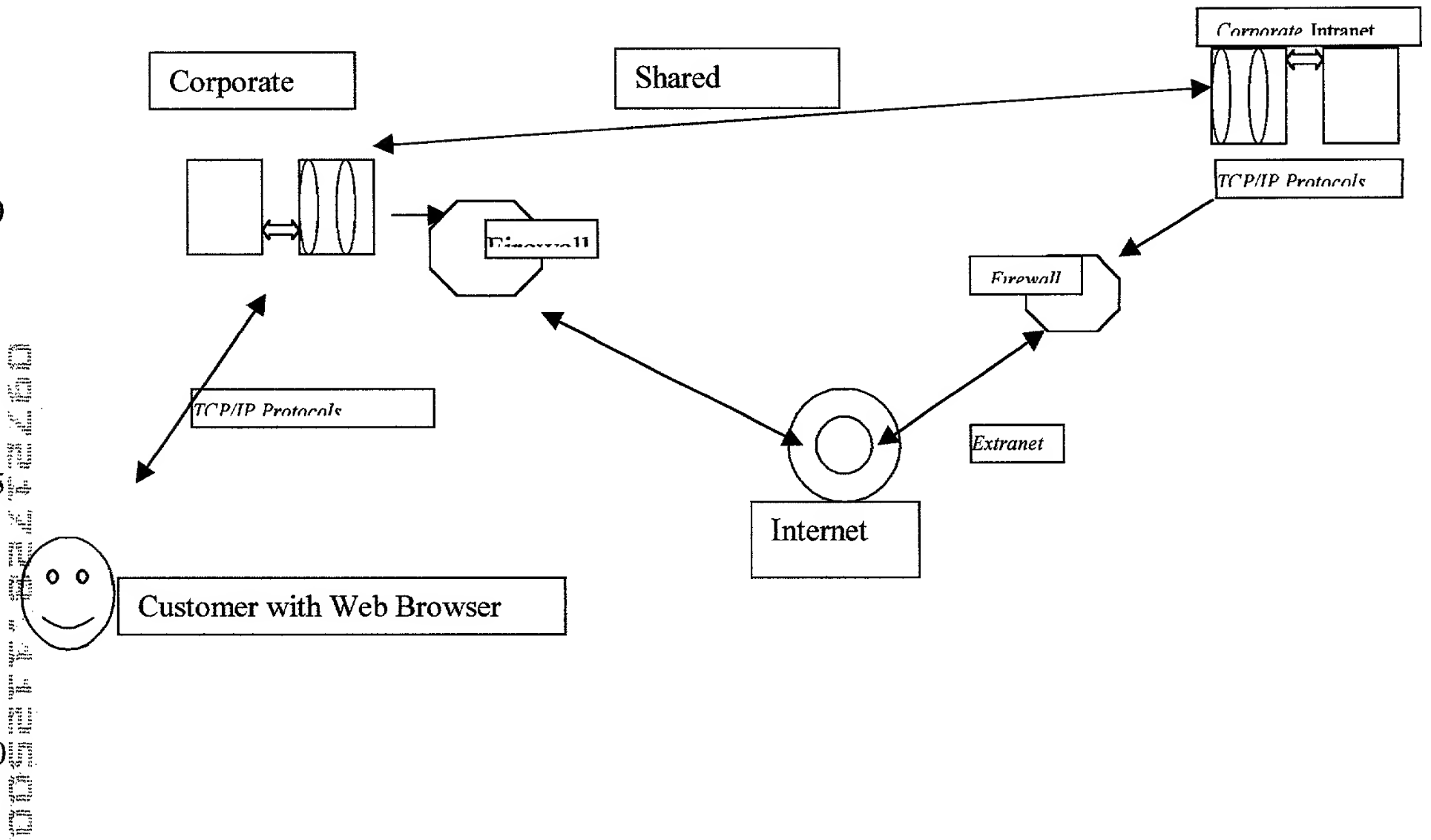


Figure 2

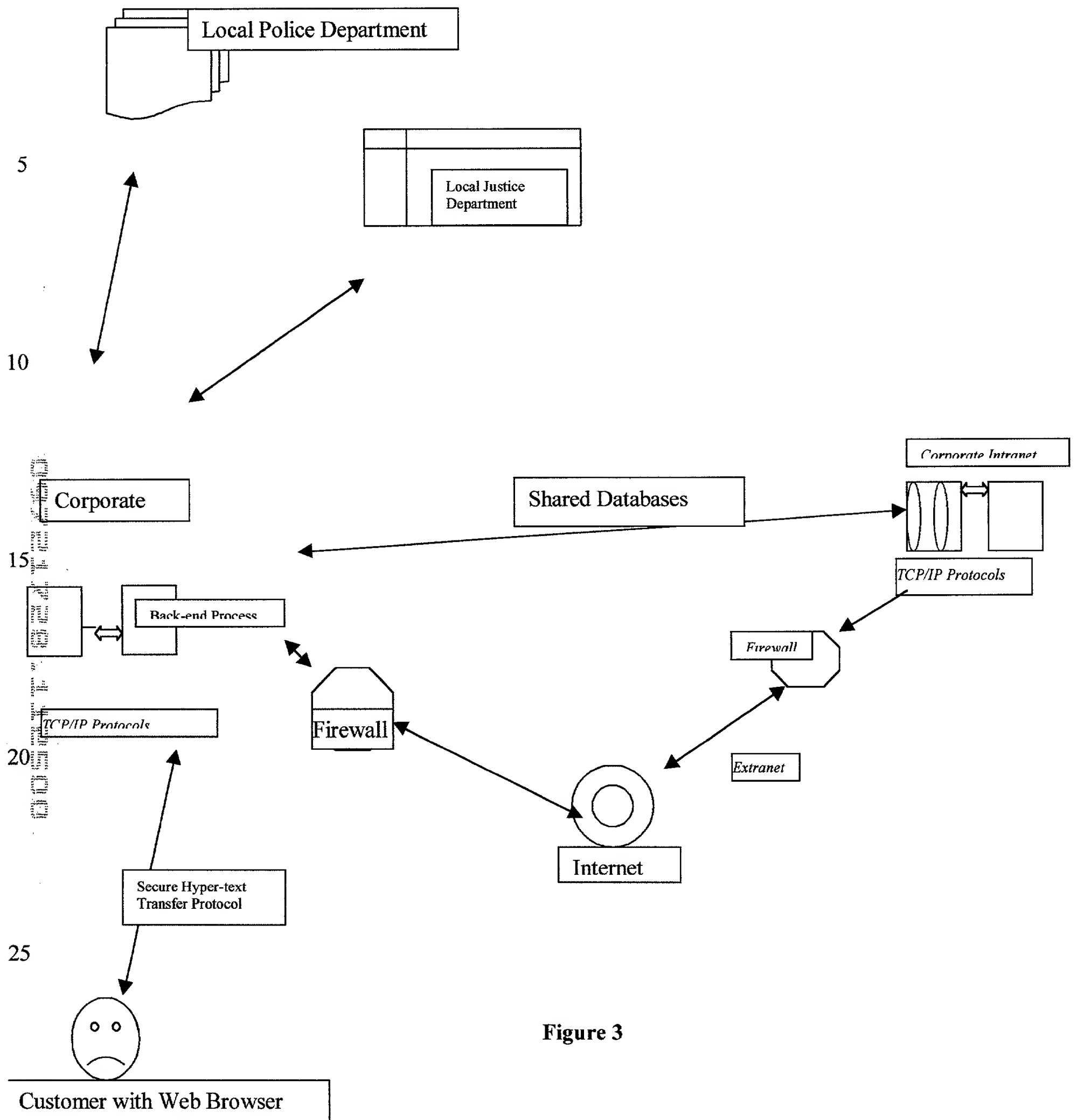
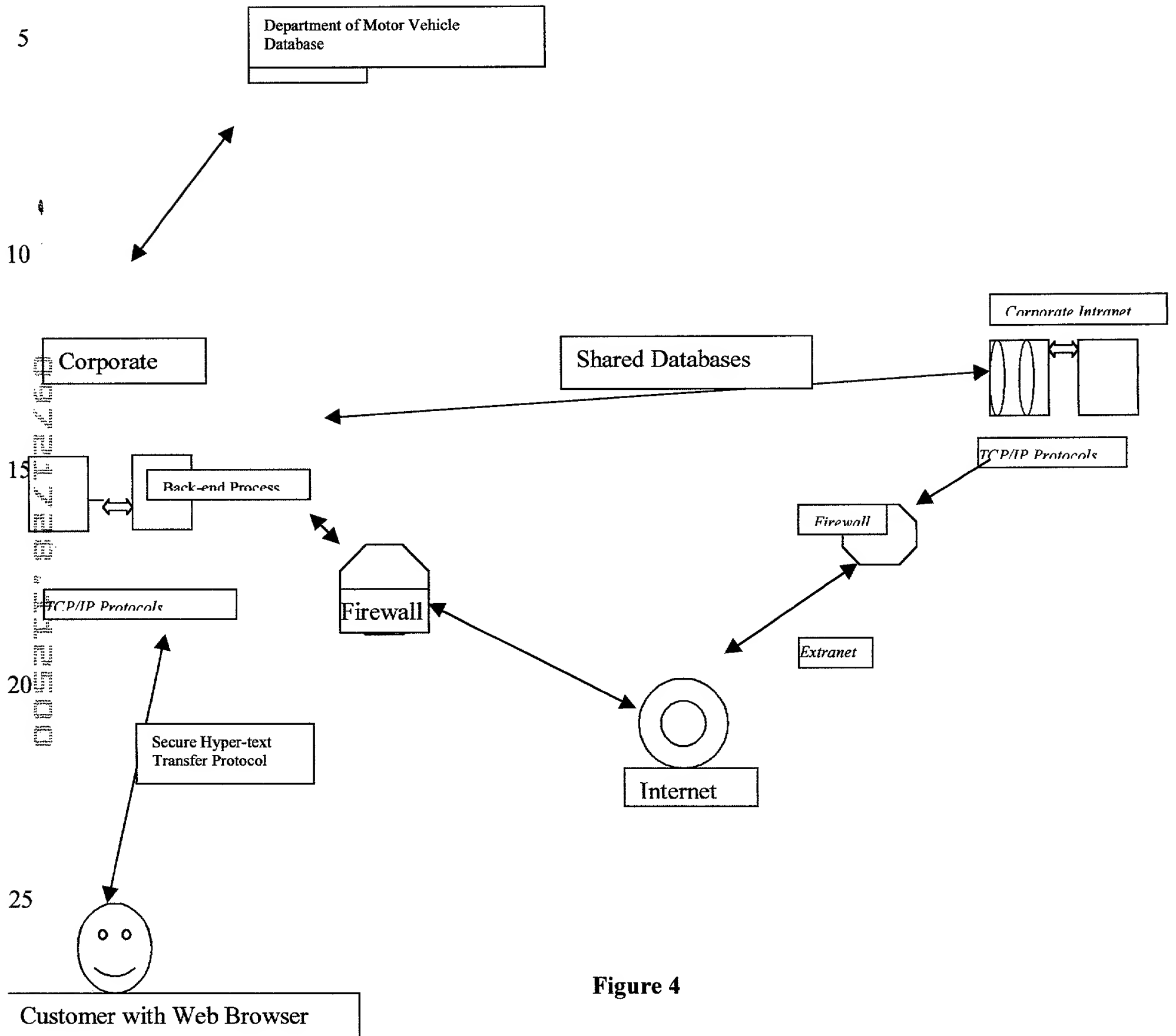
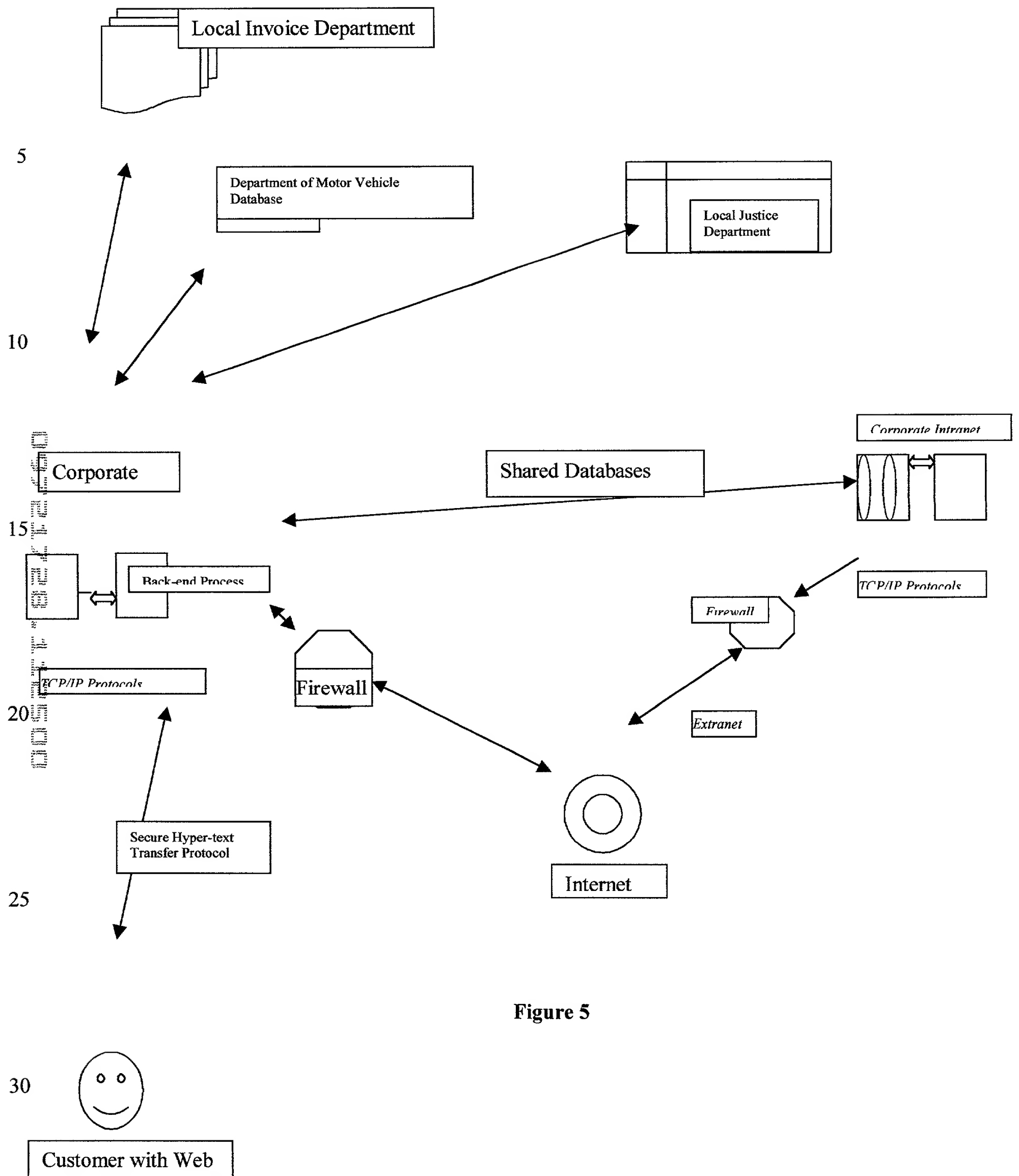


Figure 3



**Figure 4**



**Figure 5**

# Internet Utility Conceptual Design

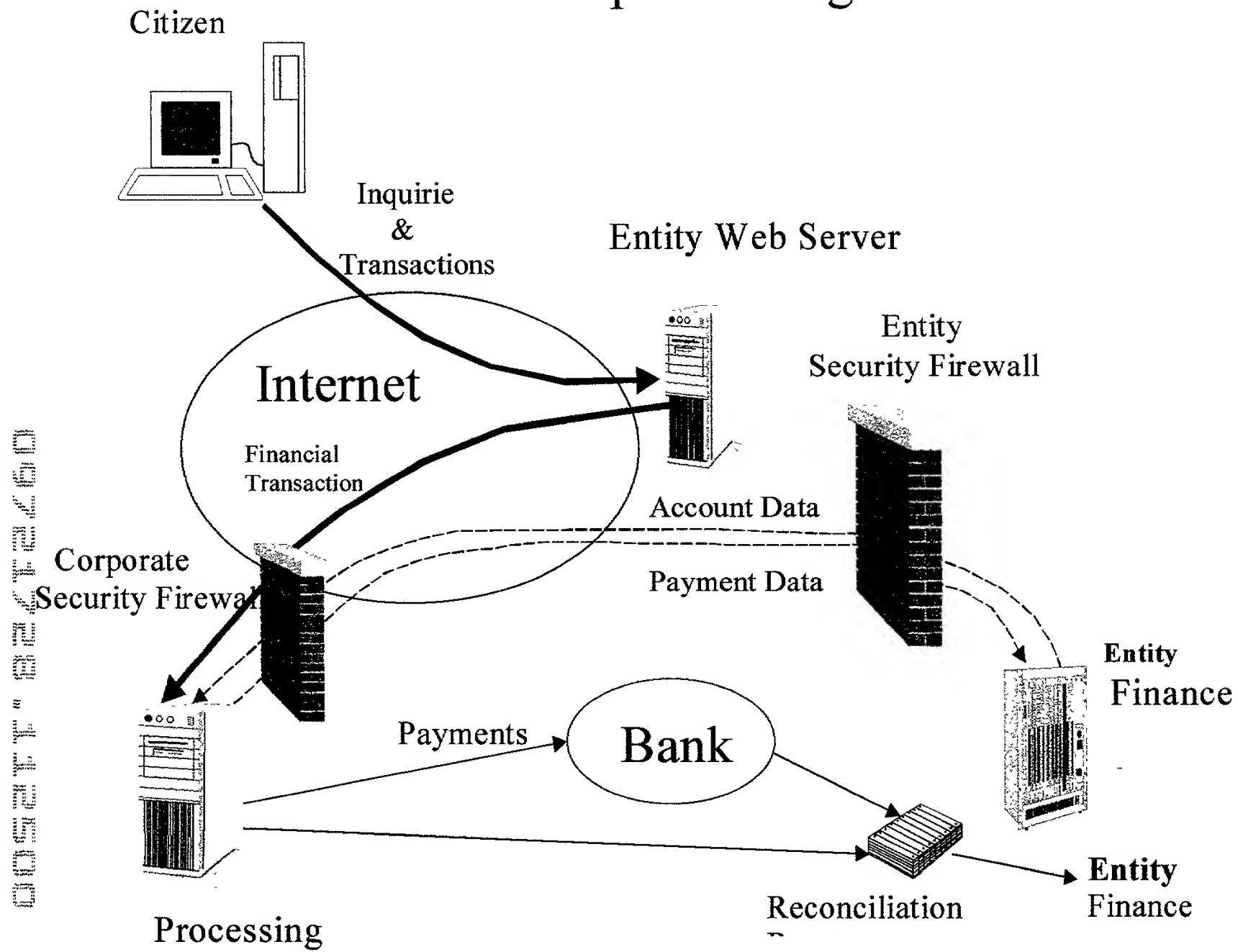


Figure 6



**DECLARATION**

AS A BELOW-NAMED INVENTOR, I HEREBY DECLARE THAT:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **A METHOD AND SYSTEM FOR CONDUCTING TRANSACTIONS ASSOCIATED WITH INVOICES USING THE INTERNET AND E-COMMERCE**, the specification of which is attached hereto unless the following box is checked:

☐ was filed on \_\_\_\_\_ as United States Application Serial No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I HEREBY STATE THAT I HAVE REVIEWED AND UNDERSTAND THE CONTENTS OF THE ABOVE-IDENTIFIED SPECIFICATION, INCLUDING THE CLAIMS, AS AMENDED BY ANY AMENDMENT REFERRED TO ABOVE.

I acknowledge the duty to disclose information which is known to me to be material to patentability in accordance with Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under 35 USC 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Application No.	Country	Date of Filing (day/month/year)	Priority Claimed?
_____	_____	_____	<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below:

application no.	60/167,938	filed on	27 Nov 1999
application no.	60/170,829	filed on	12 Dec 1999
application no.	60/174,124	filed on	30 Dec 1999
application no.	60/174,123	filed on	30 Dec 1999
application no.	60/170,829	filed on	12 Dec 1999

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

Application Serial No.	Filing Date	Status
_____	_____	<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Nov 25, 2000      Rani K. Yadav-Ranjan  
 Date                      Name: Rani K. Yadav-Ranjan  
                                  Residence: 6620 Creekview Court, San Jose, CA 95120  
                                  Citizenship: USA  
                                  Post Office Address: same as above

STATE OF California  
 COUNTY OF Santa Clara

SUBSCRIBED AND SWORN TO BEFORE ME  
 THIS 25<sup>th</sup> DAY OF November 192000  
 BY Rani K. Yadav Ranjan  
Attest  
 \_\_\_\_\_  
 NOTARY PUBLIC

